FIG. 1

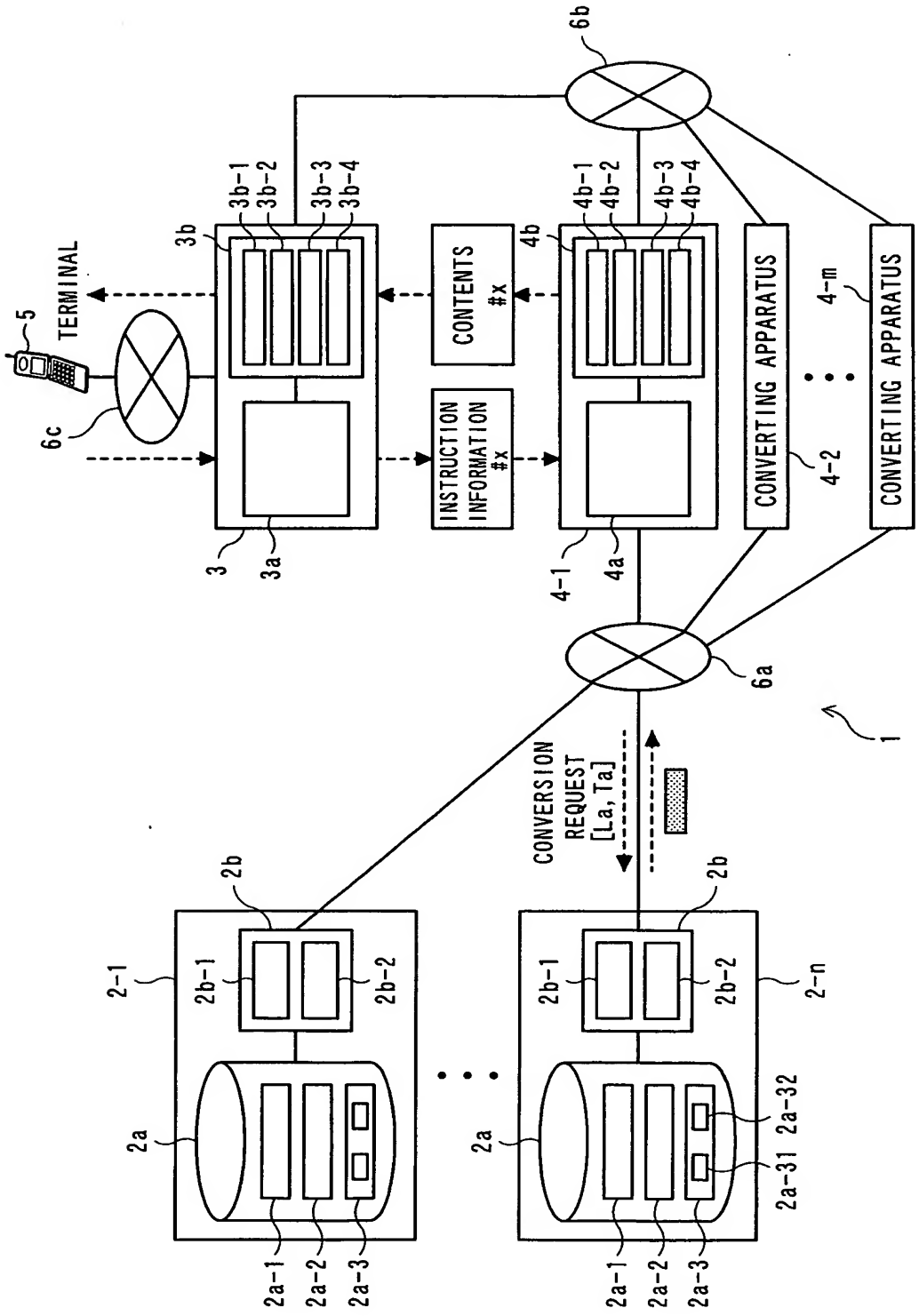

6b
3b-1
3b-2
3b-3
3b-4
4b-1
4b-2
4b-3
4b-4
3b
4b
TERMINAL
5
CONTENTS #x
CONVERTING APPARATUS
4-m
4-2
CONVERTING APPARATUS
6c
INSTRUCTION INFORMATION #x
3
3a
4-1
4a
6a
1
CONVERSION REQUEST [La, Ta]
2b
2-1
2b-1
2b-2
2-n
2a
2a-32
2a-31
2a-1
2a-2
2a-3

FIG. 2

```
<seq>
    <par dur=" 10s" >
        <video type=" WMV" src=" http://www.aaa.co.jp/av1.mpg" beginClip=" 5s "/>
        <audio type=" WMA" src=" http://www.bbb.co.jp/av2.mpg" beginClip=" 10s" />
    </par>
    <par dur=" 20s" >
        <video type=" MPEG-4 Video" src=" http://www.aaa.co.jp/av1.mpg" beginClip=" 50m "/>
        <audio type=" MPEG-1 Audio" src=" http://www.ccc.co.jp/av3.mpg" beginClip=" 30m" />
    </par>
<seq>
```

FIG. 3

SEGMENT ID	URL	MEDIA	REFERENCE START TIME	REFERENCE PERIOD
1	http://www.aaa.co.jp/av1.mpg	WMV	5s	10s
2	http://www.bbb.co.jp/av2.mpg	WMA	10s	10s
3	http://www.aaa.co.jp/av1.mpg	MPEG-4 Video	50m	20s
4	http://www.ccc.co.jp/av3.mpg	MPEG-4 Audio	30m	20s

FIG. 4

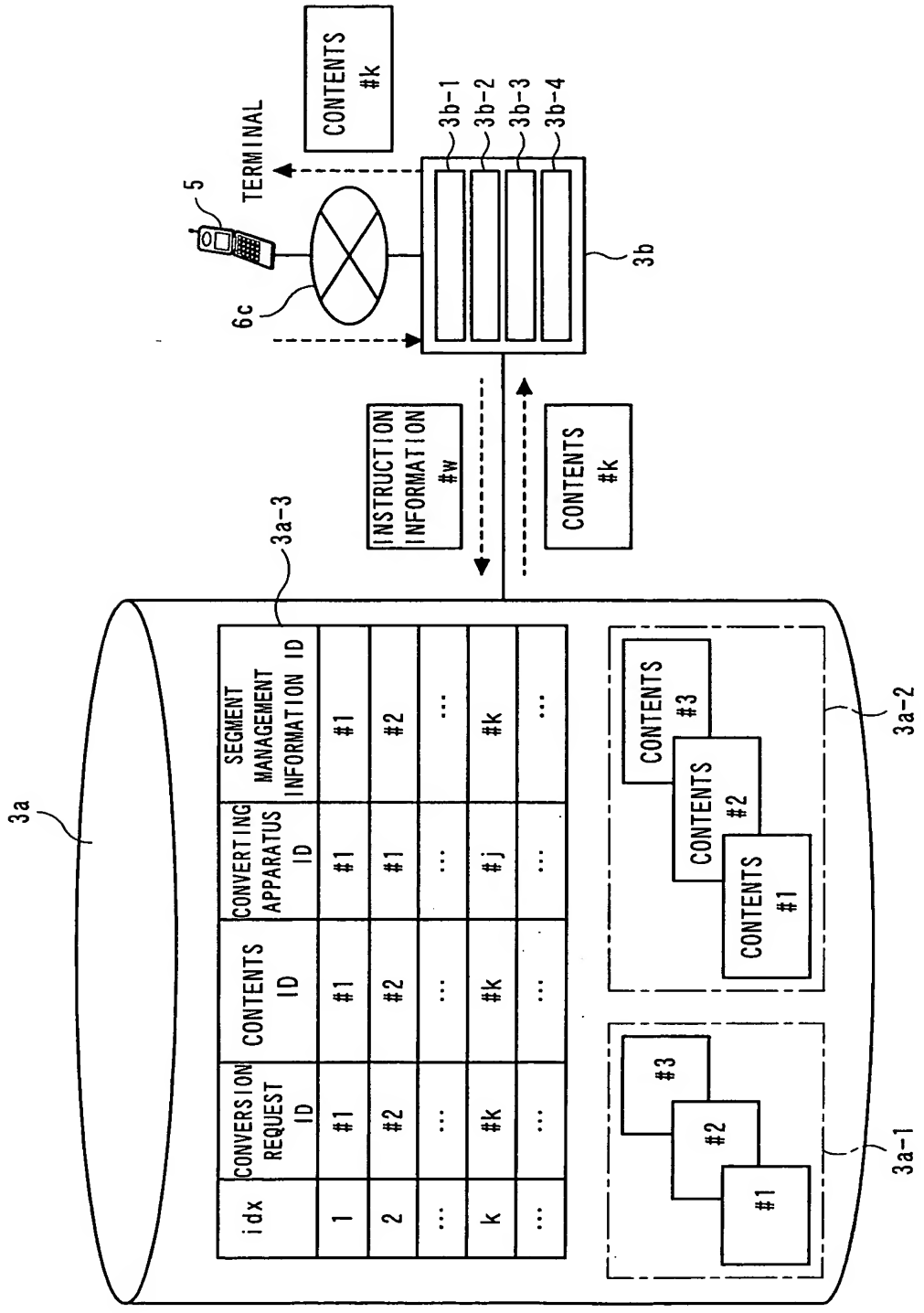

TERMINAL
5
6c
CONTENTS #k
3b-1
3b-2
3b-3
3b-4
3b
INSTRUCTION INFORMATION #w
CONTENTS #k
3a-3
3a
idx
CONVERSION REQUEST ID
CONTENTS ID
CONVERTING APPARATUS ID
SEGMENT MANAGEMENT INFORMATION ID
1 #1 #1 #1 #1
2 #2 #2 #1 #2
... ...
k #k #k #j #k
... ...
CONTENTS #3
CONTENTS #2
CONTENTS #1
3a-2
#3
#2
#1
3a-1

FIG. 5

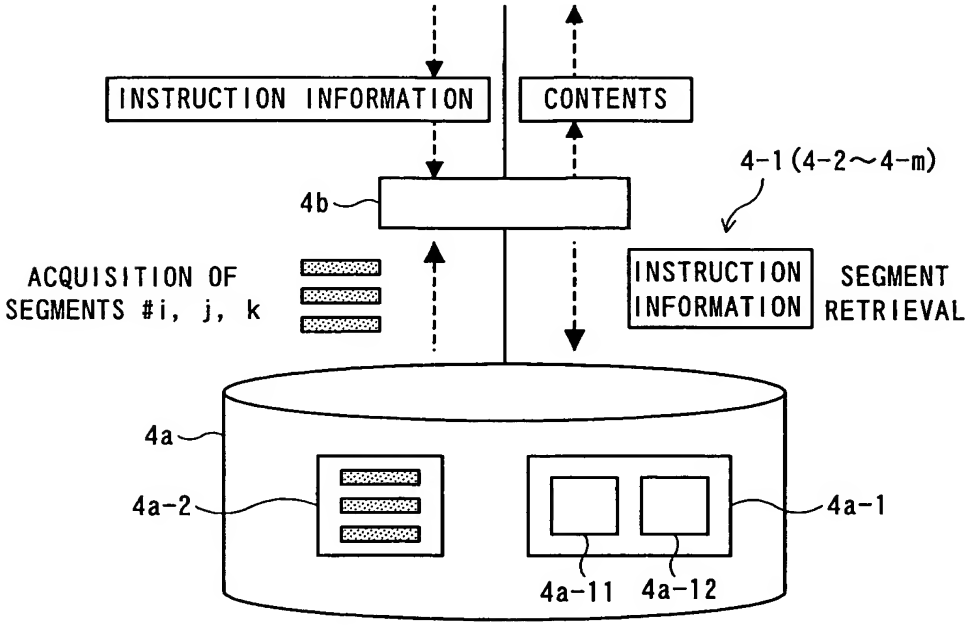


FIG. 6

4a-11

SERVER ID	URL	MEDIA	SEGMENT MANAGEMENT TABLE ID	...
1	http://www.aaa.co.jp/av1.mpg	Audio	1	...
2	http://www.bbb.co.jp/av2.mpg	Video	2	...
...	...	...	...	...
n	http://www.aaa.co.jp/avm.mpg	Audio	N	...
...	...	...	...	...

FIG. 7

4a-12

SEGMENT MANAGEMENT TABLE ID	SEGMENT ID	Cutin&cutout	ENCODING FORMAT	...
N	#1	[0,15]	WMA	...
	...	...	...	...
	#m-1	[13,18]	Mpeg-1 Audio	...
	#m	[15,39]	Mpeg-1 Audio	...
	...	...	...	...

FIG. 8

2a-31

CONTENTS ID	URL	MEDIA	SEGMENT MANAGEMENT TABLE ID		...
1	http://www.aaa.co.jp/av1.mpg	Audio	1		...
2	http://www.bbb.co.jp/av2.mpg	Video	2		...
...	...	...	...		...
m	http://www.aaa.co.jp/avm.mpg	Audio	N		...
...	...	...	...		...

FIG. 9

2a-32

SEGMENT MANAGEMENT TABLE ID	SEGMENT ID	Cutin&cutout	ENCODING FORMAT	...
m	#1	[0, 1]	Mpeg-4 Video	...
	...	...	...	...
	#k-1	[10, 15]	WMV	...
	#k	[15, 30]	RAW	...
	...	...	...	...

FIG. 10

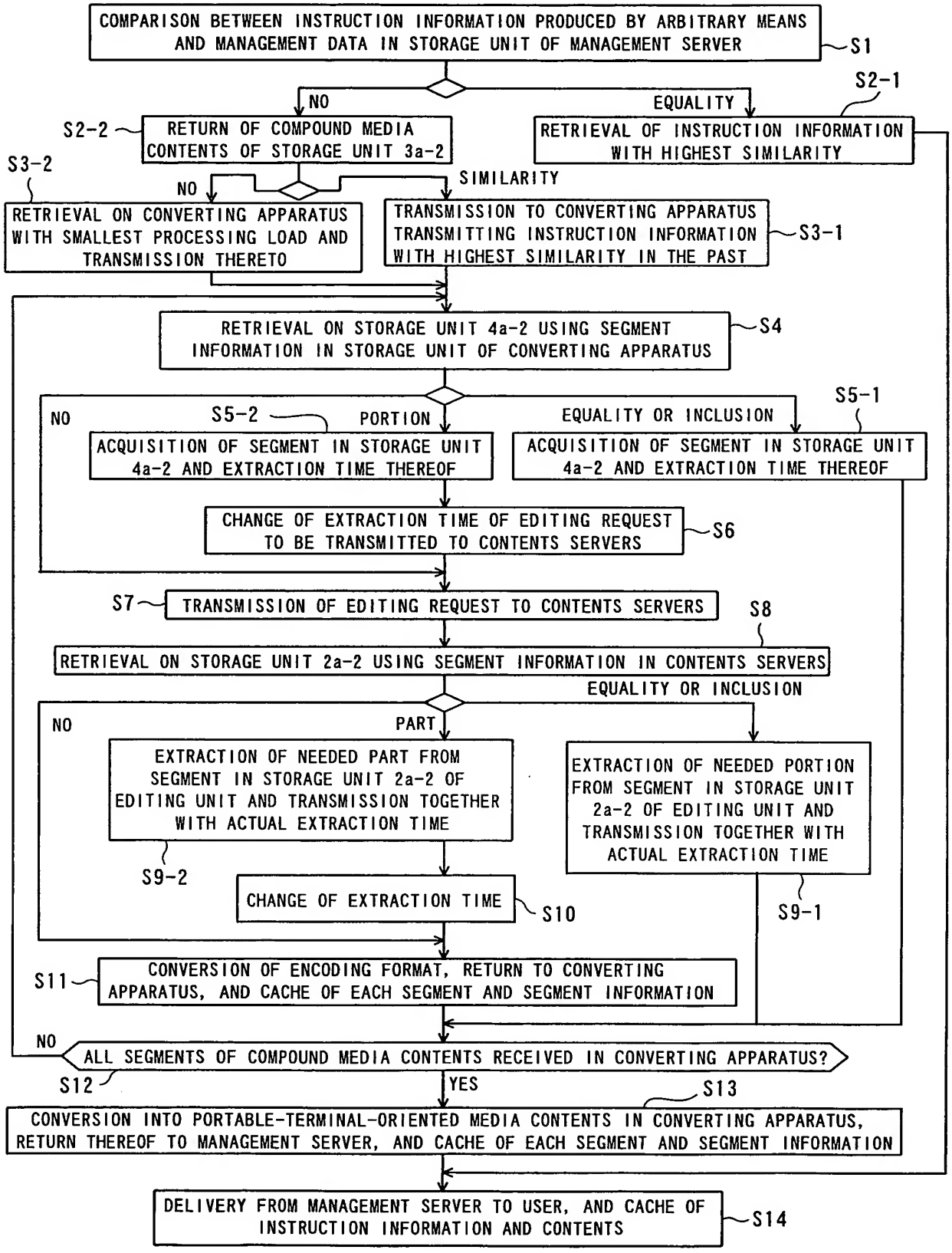

COMPARISON BETWEEN INSTRUCTION INFORMATION PRODUCED BY ARBITRARY MEANS AND MANAGEMENT DATA IN STORAGE UNIT OF MANAGEMENT SERVER
S1
NO
EQUALITY
S2-1
S2-2
RETURN OF COMPOUND MEDIA CONTENTS OF STORAGE UNIT 3a-2
RETRIEVAL OF INSTRUCTION INFORMATION WITH HIGHEST SIMILARITY
S3-2
NO
SIMILARITY
RETRIEVAL ON CONVERTING APPARATUS WITH SMALLEST PROCESSING LOAD AND TRANSMISSION THERETO
TRANSMISSION TO CONVERTING APPARATUS TRANSMITTING INSTRUCTION INFORMATION WITH HIGHEST SIMILARITY IN THE PAST
S3-1
RETRIEVAL ON STORAGE UNIT 4a-2 USING SEGMENT INFORMATION IN STORAGE UNIT OF CONVERTING APPARATUS
S4
NO
S5-2
PORTION
EQUALITY OR INCLUSION
S5-1
ACQUISITION OF SEGMENT IN STORAGE UNIT 4a-2 AND EXTRACTION TIME THEREOF
ACQUISITION OF SEGMENT IN STORAGE UNIT 4a-2 AND EXTRACTION TIME THEREOF
CHANGE OF EXTRACTION TIME OF EDITING REQUEST TO BE TRANSMITTED TO CONTENTS SERVERS
S6
S7
TRANSMISSION OF EDITING REQUEST TO CONTENTS SERVERS
S8
RETRIEVAL ON STORAGE UNIT 2a-2 USING SEGMENT INFORMATION IN CONTENTS SERVERS
EQUALITY OR INCLUSION
NO
PART
EXTRACTION OF NEEDED PART FROM SEGMENT IN STORAGE UNIT 2a-2 OF EDITING UNIT AND TRANSMISSION TOGETHER WITH ACTUAL EXTRACTION TIME
EXTRACTION OF NEEDED PORTION FROM SEGMENT IN STORAGE UNIT 2a-2 OF EDITING UNIT AND TRANSMISSION TOGETHER WITH ACTUAL EXTRACTION TIME
S9-2
CHANGE OF EXTRACTION TIME
S10
S9-1
S11
CONVERSION OF ENCODING FORMAT, RETURN TO CONVERTING APPARATUS, AND CACHE OF EACH SEGMENT AND SEGMENT INFORMATION
NO
ALL SEGMENTS OF COMPOUND MEDIA CONTENTS RECEIVED IN CONVERTING APPARATUS?
S12
YES
S13
CONVERSION INTO PORTABLE-TERMINAL-ORIENTED MEDIA CONTENTS IN CONVERTING APPARATUS, RETURN THEREOF TO MANAGEMENT SERVER, AND CACHE OF EACH SEGMENT AND SEGMENT INFORMATION
DELIVERY FROM MANAGEMENT SERVER TO USER, AND CACHE OF INSTRUCTION INFORMATION AND CONTENTS
S14

FIG. 11

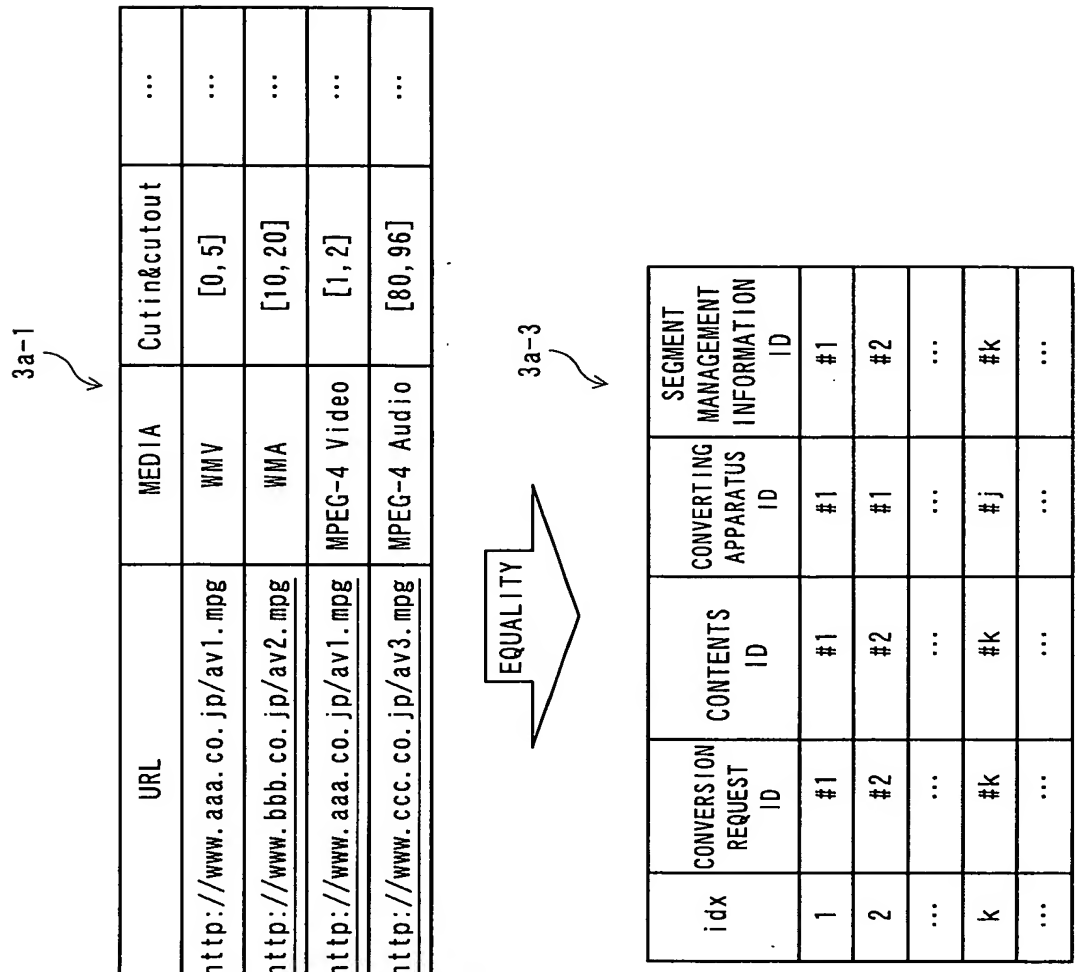

3a-1
SEGMENT ID
URL
MEDIA
Cutin&cutout
1
http://www.aaa.co.jp/av1.mpg
WMV
[0,5]
2
http://www.bbb.co.jp/av2.mpg
WMA
[10,20]
3
http://www.aaa.co.jp/av1.mpg
MPEG-4 Video
[1,2]
4
http://www.ccc.co.jp/av3.mpg
MPEG-4 Audio
[80,96]
EQUALITY
3a-3
idx
CONVERSION REQUEST ID
CONTENTS ID
CONVERTING APPARATUS ID
SEGMENT MANAGEMENT INFORMATION ID
1
#1
#1
#1
#1
2
#2
#2
#1
#2
k
#k
#k
#j
#k

FIG. 12

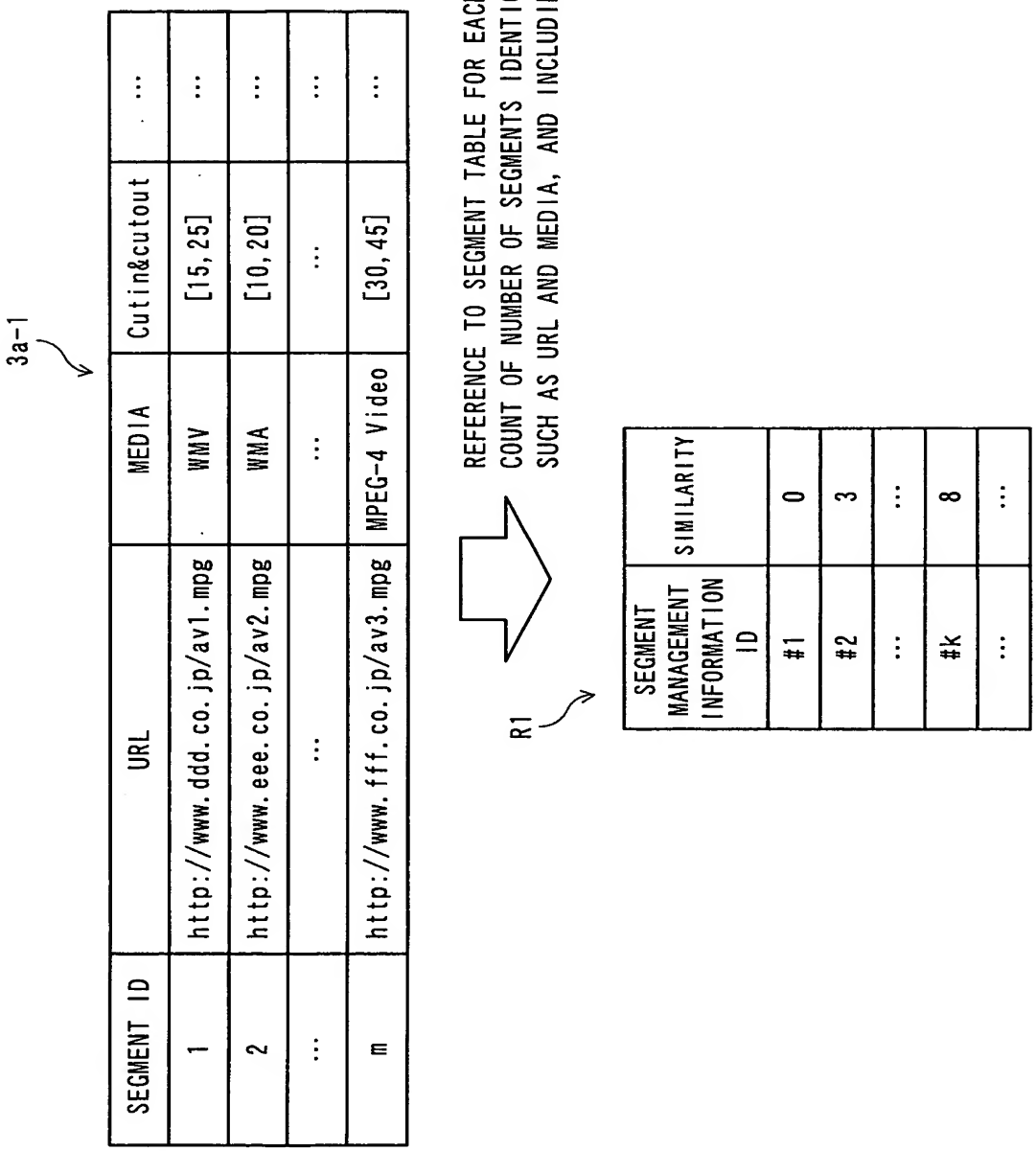

3a-1
SEGMENT ID
URL
MEDIA
Cutin&cutout
1
http://www.ddd.co.jp/av1.mpg
WMV
[15,25]
2
http://www.eee.co.jp/av2.mpg
WMA
[10,20]
m
http://www.fff.co.jp/av3.mpg
MPEG-4 Video
[30,45]
REFERENCE TO SEGMENT TABLE FOR EACH CONTENTS,
COUNT OF NUMBER OF SEGMENTS IDENTICAL TO INFORMATION,
SUCH AS URL AND MEDIA, AND INCLUDING Cutin&Cutout
R1
SEGMENT MANAGEMENT INFORMATION ID
SIMILARITY
#1
0
#2
3
#k
8

FIG. 13

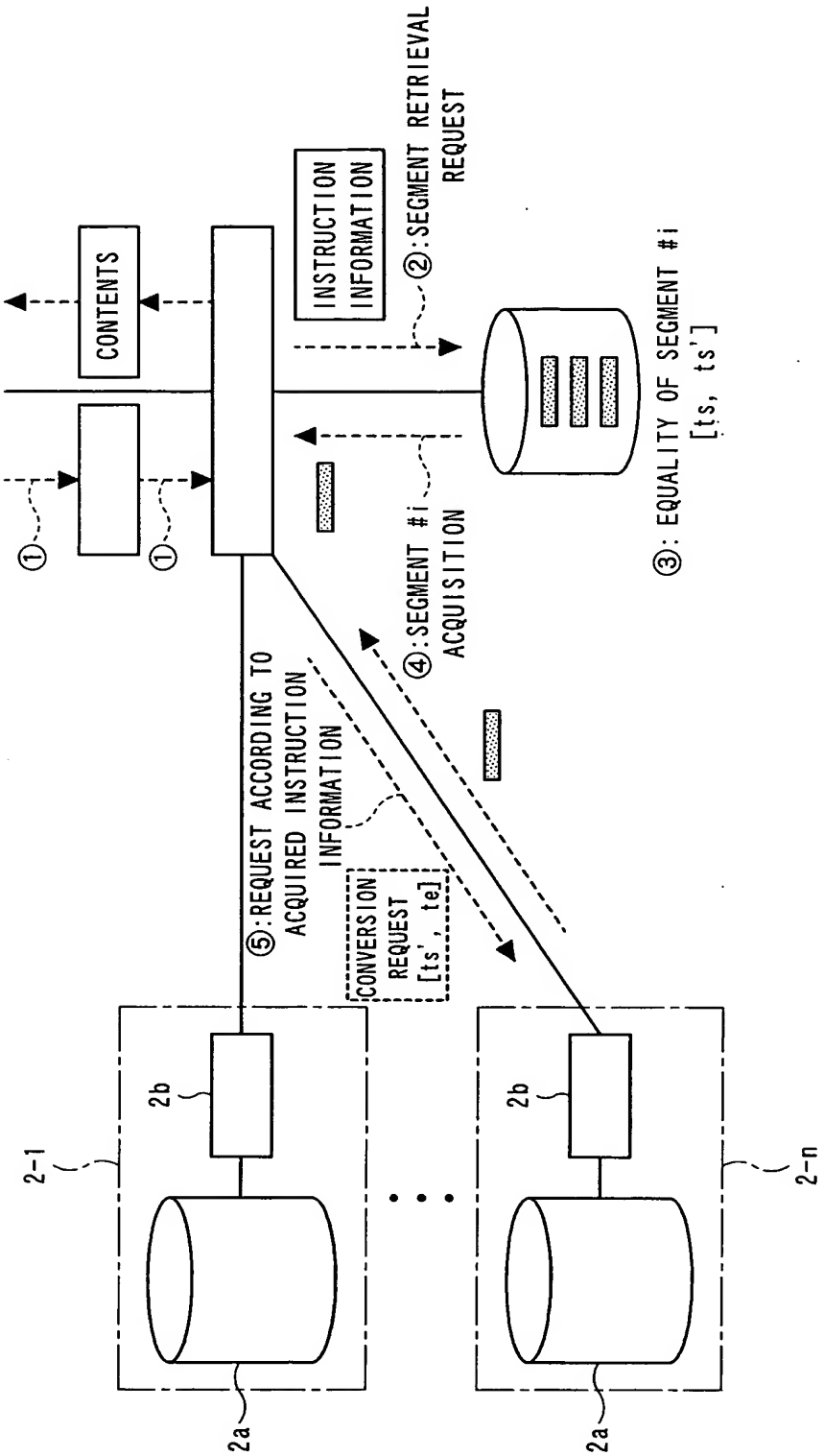

CONTENTS
INSTRUCTION INFORMATION
②:SEGMENT RETRIEVAL REQUEST
①
①
③: EQUALITY OF SEGMENT #i [ts, ts']
④:SEGMENT #i ACQUISITION
⑤:REQUEST ACCORDING TO ACQUIRED INSTRUCTION INFORMATION
CONVERSION REQUEST [ts', te]
2b
2b
2-1
2-n
2a
2a

FIG. 14

no.	REQUEST TIME	SEGMENT TIME	DIVISIONS
1	[0, 10]	[0, 10]	1
2	[20, 30]	[20, 30]	1
3	[5, 15]	[10, 15]	2
4	[25, 30]	NONE	1
...	...	...	...

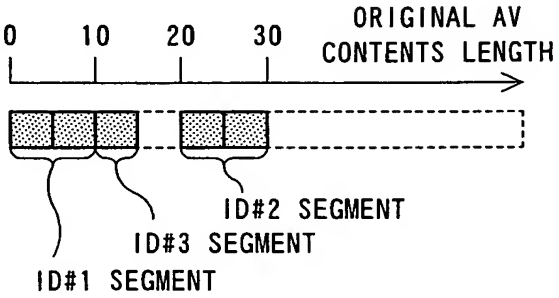


FIG. 15

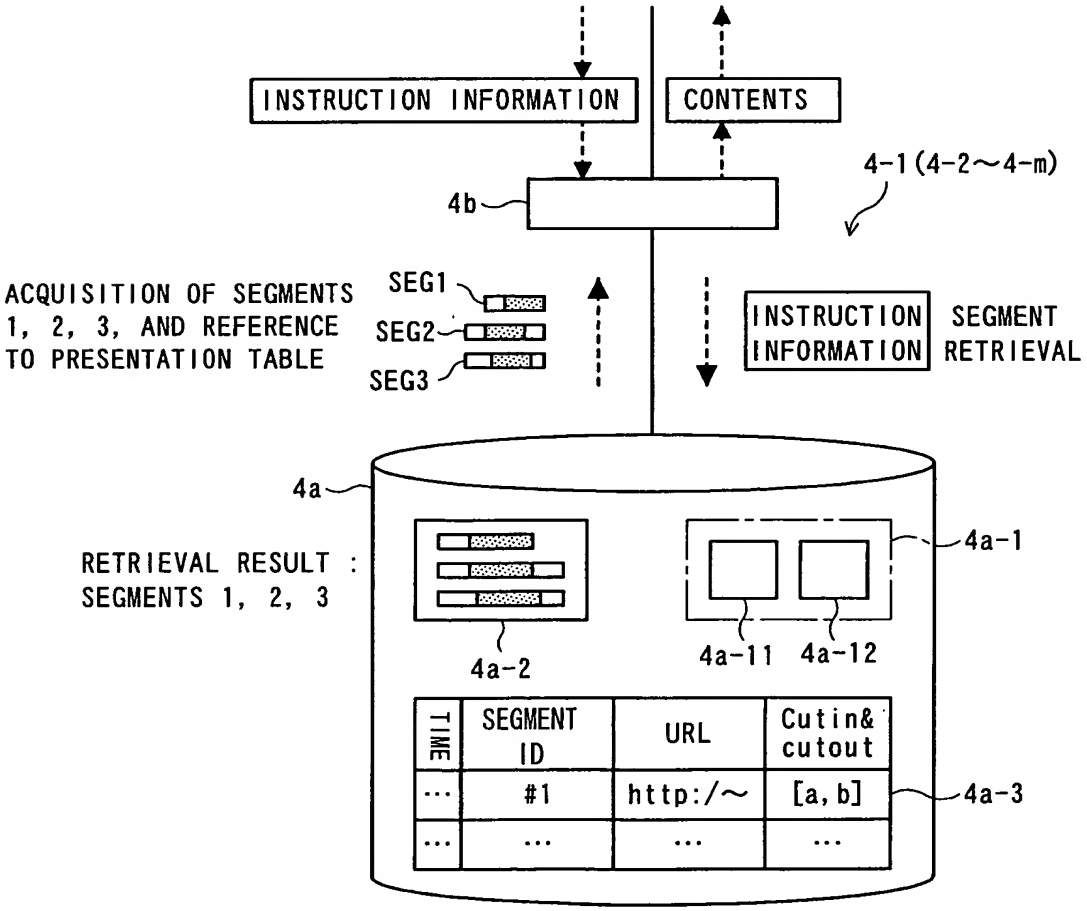


FIG. 16

4a-12

CONTENTS A TIME	SEGMENT ID	URL	Cutin&Cutout TIME OF SEGMENT	Cutin&Cutout TIME REQUESTED	...
[0, 15]	1		[5, 20]	[10, 20]	...
[15, 35]	2		[60, 80]	[63, 73]	...
[35, 55]	3		[0, 20]	[7, 17]	...

FIG. 17

4a-3

CONTENTS B PRESENTATION TIME	CONTENTS A TIME
[0, 10]	[0, 15]
[10, 20]	[15, 35]
[20, 30]	[35, 55]

FIG. 18

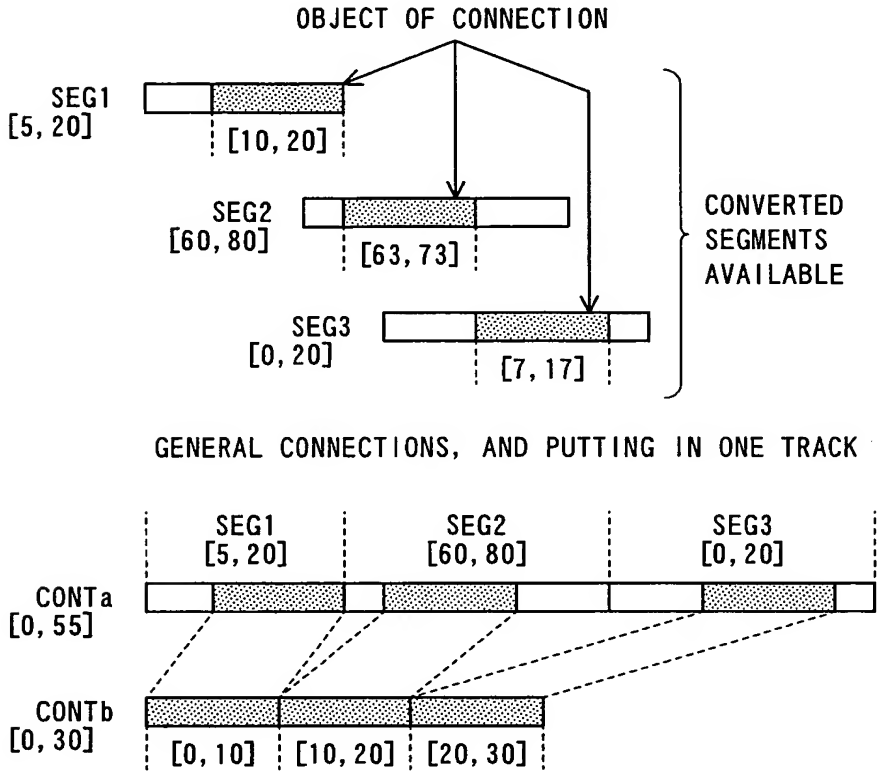
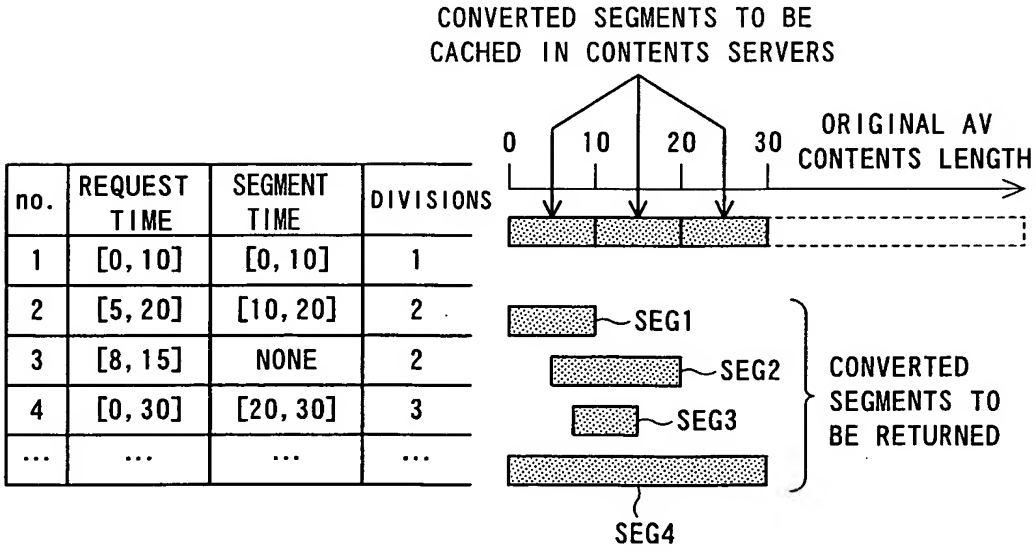


FIG. 19



no.	REQUEST TIME	SEGMENT TIME	DIVISIONS
1	[0, 10]	[0, 10]	1
2	[5, 20]	[10, 20]	2
3	[8, 15]	NONE	2
4	[0, 30]	[20, 30]	3
...	...	...	...

FIG. 20

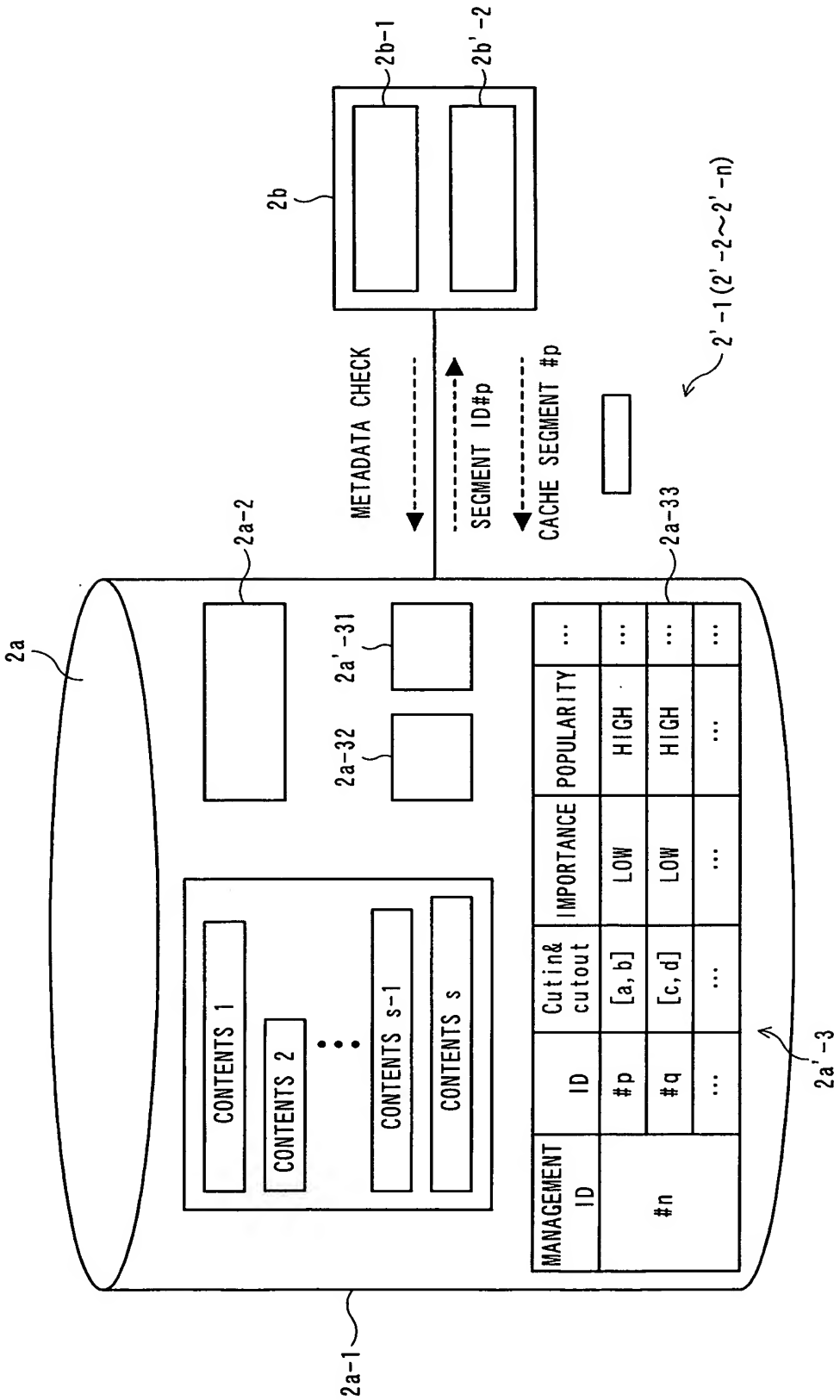
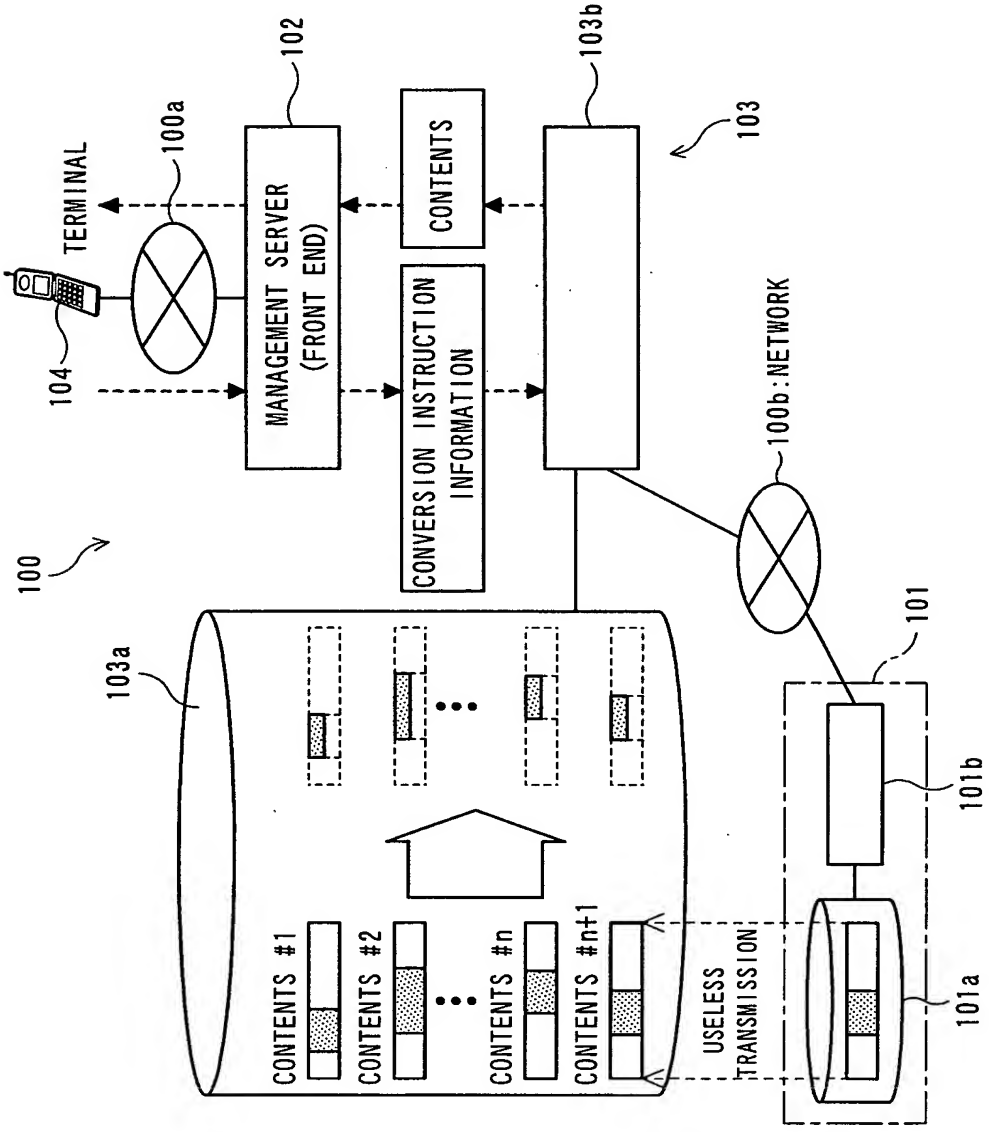

2b
2b-1
2b'-2
2'-1 (2'-2~2'-n)
METADATA CHECK
SEGMENT ID#p
CACHE SEGMENT #p
2a
2a-1
2a-2
2a'-31
2a-32
2a-33
2a'-3
CONTENTS 1
CONTENTS 2
CONTENTS s-1
CONTENTS s
MANAGEMENT ID
ID
Cutin& cutout
IMPORTANCE
POPULARITY
#n
#p
#q
[a, b]
[c, d]
LOW
HIGH

FIG. 21

2a'-31

ID	URL	MEDIA	SEGMENT MANAGEMENT TABLE ID	METADATA TABLE ID	...
1	http://www.ccc.co.jp/av1.mpg	Audio	1	1	...
2	http://www.ddd.co.jp/av2.mpg	Video	2	2	...
...	...	...	...	...	...
m	http://www.fff.co.jp/avm.mpg	Video	M	M	...
...	...	...	...	...	...

FIG. 22


TERMINAL
104
100a
102
MANAGEMENT SERVER (FRONT END)
CONTENTS
103b
103
CONVERSION INSTRUCTION INFORMATION
100b:NETWORK
100
101
103a
101b
CONTENTS #1
CONTENTS #2
CONTENTS #n
CONTENTS #n+1
USELESS TRANSMISSION
101a